iris touch
Alarm over IP

IRIS Touch 600 Series Installation Manual

Version 1.4

Now certified and compliant with EN50131, EN50136 Security Grade 4 ATS6

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1. Introduction

1.1. About this manual…

This manual is designed to help you, the installer, with the installation process for the IRIS Touch alarm dialler. We recommend that you read through this manual, in its entirety, before you visit the customer's site and begin the installation.

Please note:

- For the fire alarm installations that must conform to European standard EN54-21 please make sure the installation conforms to the requirements set out in Chiron's installation guide "IRIS Touch Range Dialler Installation Guide for EN54-21 Compliant Fire Applications".
- For the installations that must conform to the requirements of the UK specific standards LPS1277 make sure the installation conforms to the requirements set out in Chiron's installation guide "IRIS Touch Range Dialler Installation Guide for LPS1277 Compliant Applications".

1.2. Overview

The IRIS Touch range of alarm diallers allows users to migrate intruder alarm systems away from traditional PSTN communications to IP based and/or wireless networks, without the need to upgrade or replace the alarm system.

The majority of the intruder alarm systems which are configured to make alarm calls to a central monitoring station use the traditional PSTN analogue network as the communications path. However, PSTN becomes increasingly unsuitable as users move to IP and Voice over IP (VoIP) for their fixed networks or rely purely on mobile (GSM and GPRS) communication. In addition most PSTN service providers migrate to VoIP networks, so in the not too distant future PSTN lines may be withdrawn.

The IRIS Touch dialler range is unique in offering a quick and cost effective way to interface any existing alarm system to alternative networks such as GSM, Ethernet and GPRS. As a result of the flexibility and power of IRIS Touch it has become the IP transmission system of choice for Monitoring Centres across Europe.

The IRIS Touch 600 Series is a PCB format unit intended to be used in the following situations:

- The alarm panel can communicate with the IRIS card via a serial/RS485 interface on the IRIS Touch dialler. This includes panels such as Honeywell Galaxy and Texecom Premier
- The requirements for alarm signalling is limited to 4 pin inputs, for example, fire systems or cash machines

The range includes the three following diallers:

- IRIS Touch 600 - GPRS
- IRIS Touch 620 - Ethernet
- IRIS Touch 640 - Ethernet & GPRS

The IRIS Touch dialler should be located within the alarm panel tamper protected enclosure and powered from the alarm panel battery backed power supply.

1.3. System specifications

Feature	IRIS Touch 600 GPRS	IRIS Touch 620 Ethernet	IRIS Touch 640 Ethernet & GPRS
Serial data connection for direct connection to alarm panels	✓	✓	✓
RS485 data connection for direct connection to alarm panels	✓	✓	✓
Alarm transmission and panel upload/download via serial or RS485 connection	✓	✓	✓
Support for SIA (1-3), Contact ID, and Scancom (Fast Format)	✓	✓	✓
Secure polling (monitoring) over Ethernet		✓	✓
Secure alarm transmission over Ethernet		✓	✓
Pin inputs for alarm messages over Ethernet		4	4
Configuration and diagnostic over Ethernet		✓	✓
Secure polling (monitoring) over GPRS	✓		✓
Secure alarm transmission over GPRS	✓		✓
Pin inputs for alarm messages over GPRS	4		4
Configuration and diagnostics over GPRS	✓		✓
Relay contact outputs	2	2	2
Pin inputs for alarm messages over SMS	4		4
USB port for local configuration	✓	✓	✓
9-30V DC power from alarm panel	✓	✓	✓

2. Before you start…

2.1. Package contents

In this package you should have the following components:

- IRIS Touch dialler PCB with four self-adhesive feet
- Ethernet cable (cream) for connection to IP network*(Ethernet versions only*)
- Antenna for GSM/GPRS *(GPRS versions only*)
- Installation manual

2.2. Pre-requisites

Prior to the installation, you **must** ensure you have the following:

- If the installation is in a residential environment, you will need to fit inductors to the input cables of the dialler in order to ensure compliance with EMC Class B emissions requirements. Suitable inductors can be obtained from Chiron
- The IP address for the Monitoring Centre
- Confirmation that the Monitoring Centre is set up and ready for the account number or name to be used for this IRIS Touch dialler
- The type of IP address (either automatic or fixed) for the installation site. If the site has a fixed IP address, you should get this information from the customer in advance, together with the Gateway Address and the Subnet Mask for the IRIS dialler. *(Ethernet versions only*)
- An additional long Ethernet CAT5 cable, in case the installation site requires one longer than that supplied with the IRIS dialler. Cable lengths up to 100m are allowable *(Ethernet versions only*)
- A SIM card enabled for GPRS with the PIN code clear (*GPRS versions only*)
- The GPRS Access Point Name (APN) of the SIM card provider. Some networks also require a User Name and Password which can also be obtained from the SIM card provider. (*GPRS versions only*)

3. Indicators

The IRIS Touch diallers have LED indicators [1] that have the functions described below:

Name	Function
ETH	On when Ethernet connected and synchronized *(Ethernet versions only)*
GPRS	On when GSM registered*(GPRS versions only)*
POLL	On when successfully polling with Monitoring Centre **Note:** Flickers off to show each poll
SERIAL	0.2s On, 0.2s Off - to show not communicating with panel 1.5s On, 1.5s Off - to show dialler not configured 0.1s On, 0.9s Off - to show normal communication
SYS	Flashes 0.5s On, 0.5s off to show dialler operational

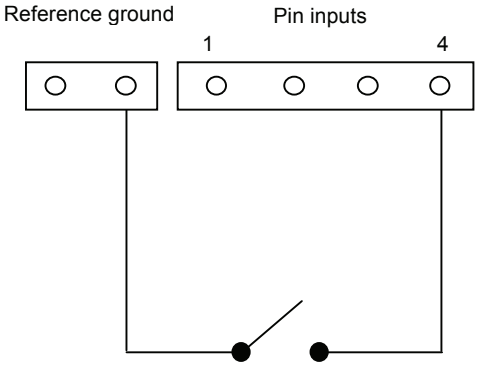
4. Installation for PIN alarms

The IRIS Touch dialler has PIN inputs that can be used to generate alarm messages. These can be:

- Text messages via SMS (*GPRS versions only*)
- SIA alarm messages over IP to the Monitoring Centre
- Fast Format alarm messages over IP to the Monitoring Centre

Note: These pin alarm inputs can also be used when the dialler is directly connected to an alarm panel via the serial or RS485 connections.

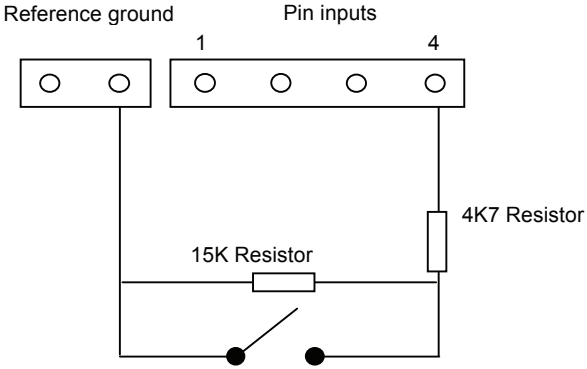
Each PIN input [5] is designed to be connected in a loop via an open/close contact source from an alarm panel, or other device, to a reference ground PIN [6] available on the IRIS dialler, as shown below:



Opening the contact (i.e. loop is open circuit) generates an alarm signal

Closing the contact generates the equivalent restore signal

It is also possible to link the contacts to the IRIS Touch dialler via sense resistors so that an open or short circuit tamper on the loop can be detected and the Monitoring Centre alerted. In this case the connections should be made as shown below:



Note: For this feature to work correctly, it is essential that the resistors are connected at the contact end of the loop and not the dialler end. The Monitoring Centre must also enable the monitoring of this facility on the dialler within the IRIS receiving system.

4.1. Installation

Use the following procedure to install the IRIS Touch dialler for PIN alarms:

1. Install the IRIS Touch dialler inside the existing alarm panel enclosure and fix with the self-adhesive feet
2. Plug the Ethernet cable (cream) between the socket [2] on the IRIS Touch dialler and the local IP router or socket that has been allocated for the IP connection *(Ethernet versions only)*
3. Connect the antenna to the PCB [3] (*GPRS versions only*)
4. Fit the SIM card [4] (*GPRS versions only*)

Power must not be applied to the PCB while the SIM card is being fitted or removed or it may be damaged

5. Connect the power from the panel's battery backed supply to the IRIS Touch power connection terminals [7]

Check the following:

- The Ethernet LED is on steady to show that the Ethernet is connected *(Ethernet versions only)*
- The GPRS LED goes steady to show that the GSM is registered(*GPRS versions only*)

4.2. Configuration

Configuration is performed by using the virtual touch screen within Chiron's IRIS Touch dialler configuration software running on a PC or laptop which is connected to the dialler via the USB interface. This screen gives access to the Installation Wizard that guides you through the setup process. It is necessary to enter a pin number, which is set by default to "111111". It is strongly recommended that this pin number is changed from the default, which is an option available in the ***Settings*** menu.

If monitoring of tamper is required, this must be enabled on the dialler, which can either be done in the ***Installation Wizard*** for all inputs in use, or for each input individually in the ***Settings*** menu.

The default SIA messages for each PIN are shown below:

Pin	'Set' message	'Restore' message	Meaning
1	NBA01	NBR01	Burglary alarm/restore
2	NFA02	NFR02	Fire alarm/restore
3	NQA03	NQR03	Emergency alarm/restore
4	NOP04	NCL04	Open/close

These can be changed from Dialler Configuration software if required.

4.3. Post configuration tests

Carry out tests on all the alarm inputs to make sure the Monitoring Centre receives the signals correctly.

If using GPRS backup, disconnect the Ethernet cable and check that the signals are still received correctly.

5. Installation for use with Galaxy panels

5.1. Installation

Use the following procedure to install the IRIS Touch dialler for use with Galaxy panels:

1. Install the IRIS Touch dialler inside the existing alarm panel enclosure and fix with the self-adhesive feet
2. Plug the Ethernet cable (cream) between the socket [2] on the IRIS Touch dialler and the local IP router or socket that has been allocated for the IP connection. *(Ethernet versions only)*
3. Connect the antenna to the PCB [3] (*GPRS versions only*)
4. Fit the SIM card [4] (*GPRS versions only*)

Power must not be applied to the PCB while the SIM card is being fitted or removed or it may be damaged

5. Connect to the Galaxy bus using either a standard Galaxy jumper cable to the 4 pin header connector [8] or wires to the connector block [7]
6. Turn on the power to the panel

Check the following:

- The Serial LED shows 'Not Configured' (1.5s on, 1.5s off) or Normal (.1s on, .9s off) to confirm that the dialler is communicating with the panel
- The Ethernet LED is on steady to show that the Ethernet is connected *(Ethernet versions only)*
- The GPRS LED goes steady to show that the GSM is registered (*GPRS versions only*)

5.2. Configuration

The IRIS Touch dialler can be configured from the Galaxy keypad.

Note: For GPRS it is not possible to configure the settings (e.g. APN) from the Galaxy keypad as the Galaxy has no entry method.

For GPRS versions, the APN can be configured via an SMS message from any mobile phone or by running Chiron's IRIS Touch dialler configuration software on a PC or laptop connected to the dialler via the USB interface.

The configuration menu on the Galaxy panel for the Ethernet card is found at location 56 (Communications) entry 4 (Ethernet).

If the IRIS Touch dialler is not set to the defaults, default it by clearing the Primary IP address on the Galaxy (menu 02, entry 2). Check that the SERIAL LED is showing 'Not Configured'.

If GPRS is used, set the GPRS APN. This cannot be done from the Galaxy keypad as there is no APN menu entry. As an alternative, send a text message to the phone number of the SIM card being used. The text should be in the format:

AT%G10='apn'

Where 'apn' is the APN name, e.g. 'orangeinternet'

Alternatively, the information can be set via the virtual touch screen within Chiron's IRIS Touch Dialler Configuration software. It is necessary to enter a pin number, which is set by default to "111111". It is strongly recommended that this pin number is changed from the default, which is an option available in the ***Settings*** menu.

On Ethernet versions, for a fixed IP address only, set the IP address, Subnet Mask and Gateway address on the Galaxy keypad menu 01 (Module Configuration). The Site Name parameter is not required.

In the Alarm Report menu (02) set the following:

- Alarm format required (e.g. SIA) (entry 1)
- IP address of Monitoring Centre in Primary IP (entry 2). Note that the Port Number is not required
- Account number (entry 4)
- Other menu entries are not used and need not be set

Make an Engineer Test call (menu 05). The parameters entered will be sent from the panel to the dialler and polling to the Monitoring Centre will start.

Check that the Poll LED comes on.

5.3. Post configuration tests

Carry out alarm signaling tests to make sure the Monitoring Centre receives the signals correctly.

If using GPRS backup, disconnect the Ethernet cable and check that the signals are still received correctly.

5.4. Trouble reporting

The IRIS Touch dialler may report the following trouble conditions to the Galaxy panel:

- Line Fail - if polling via Ethernet or GPRS is not successful
- Fail to communicate - if the alarm is not transmitted successfully after ten attempts

5.5. Alarm panel management

The IRIS Touch adapter acts as a conduit for remote configuration of the Galaxy panel and remote keypad operation using Honeywell's RSS software running with direct IP connection on the PC.

Incoming and outgoing calls are supported:

- Incoming calls (from RSS) are initiated using the fixed IP address set for the adapter and the default Galaxy port number '10001'
- Outgoing calls are initiated from the IRIS Polling Engine using the IRIS Remote Data Call function to the IP address of the PC running the RSS software

6. Installation with Texecom panels

6.1. Installation

Use the following procedure to install the IRIS Touch dialler with Texecom panels:

1. Install the IRIS Touch dialler inside the existing alarm panel enclosure and fix with the self-adhesive feet
2. Plug the Ethernet cable (cream) between the socket [2] on the IRIS Touch dialler and the local IP router or socket that has been allocated for the IP connection. *(Ethernet versions only)*
3. Connect the antenna to the PCB [3] (*GPRS versions only*)
4. Fit the SIM card [4] (*GPRS versions only*)

Power must not be applied to the PCB while the SIM card is being fitted or removed or it may be damaged

5. Connect to a panel serial port bus using a straight-through one-one jumper cable
6. Turn on the power to the panel

Check the following:

- The Serial LED shows 'Not Configured' (1.5s on, 1.5s off) or Normal (.1s on, .9s off) to confirm that the dialler is communicating with the panel. This may take a few minutes after power up
- The Ethernet LED is on steady to show that the Ethernet is connected
- The GPRS LED goes steady to show that the GSM is registered (*GPRS versions only*)

6.2. Configuration

Configuration is through the panel keypad under the UDL/Digi options menu, according to Texecom's instructions.

If GPRS is used, first set the GPRS APN. This cannot be done from the Texecom keypad as there is no APN menu entry. As an alternative, send a text message to the phone number of the SIM card being used. The text should be in the format:

AT%G10='apn'

Where 'apn' is the APN name, e.g. 'orangeinternet'.

Alternatively, the information can be set via the virtual touch screen within Chiron's IRIS Touch Dialler Configuration software. It is necessary to enter a pin number, which is set by default to "111111". It is strongly recommended that this pin number is changed from the default, which is an option available in the ***Settings*** menu.

In the Setup Modules sub menu, select **Setup IP Data** and define:

- On Ethernet versions, IP address, Gateway address and Net Mask of the dialler (if fixed IP address used)
- Port number to be used for communications with Wintex
- Polling IP address of the Monitoring Centre
- Dialler name
- Modem speed is set to '19200'

In the Com Port Setup sub menu, make sure the com port used to connect to the dialler is set as 'IRIS IP Module'.

6.3. Post configuration tests

Carry out the usual alarm signaling tests to ensure the Monitoring Centre receives the signals correctly.

If using GPRS backup, disconnect the Ethernet cable and check that the signals are still received correctly.

6.4. Alarm panel management

The IRIS Touch adapter acts as a conduit for remote configuration of the panel and remote keypad operation using Texecom's, Wintex software running with direct IP connection on the PC.

Incoming and outgoing calls are supported:

- The IP address of the PC running the Wintex software. Incoming calls are initiated using the fixed IP address set for the adapter and the port number set on the panel and in Wintex
- Outgoing calls are initiated from the IRIS Polling Engine using the IRIS Touch Remote Data Call function

7. Relay outputs

The IRIS Touch dialler has two relay outputs [10] that can be used in a number of ways:

- To indicate communications path failure
- Activation by incoming SMS Message
- Setting by the Monitoring Centre

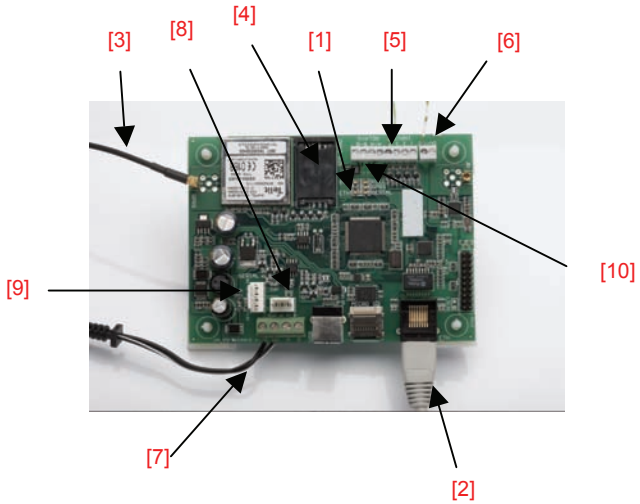
The relay contacts are normally open and closed when activated.

Wire to these contacts as required and define how they are to be used using the configuration software [16]

8. Troubleshooting

Problem	Resolution
No LED activity display when IRIS Touch dialler is connected to the power	Check that there is power to the system and that the wiring is the correct polarity
Serial LED flash pattern indicates no connection to the panel	Alarm panel serial/RS485 interconnect fault

Appendix A – Installation photo/screen shot



Appendix B – Specification

SPECIFICATIONS	IRIS Touch 600	IRIS Touch 620	IRIS Touch 640
Polling (monitoring of connection) & alarm transmission via Ethernet		✓	✓
Polling (monitoring of connection) & alarm transmission via GPRS	✓		✓
CONTROL PANEL INTERFACE			
Direct serial (bus) connection	Honeywell Galaxy Classic,G2,G3 and dimension (V4.00 and above) via RS485		
	Texecom Premier Series (V7.6 and above) via RS232		
	Texecom International Series (V15.x and above via RS232)		
	Cooper Scantronic I-ON Series (with optional CT Interface board via RS23)		
ETHERNET INTERFACE (IRIS Touch 620 and IRIS Touch 640)			
10 Mbps and 100 Mbps (10/100 Base T) with auto -negotition			
Standard RJ45 connector for CAT-5 cable			
Allows for the use of fixed IP address or DHCP			
GRPS/GSM INTERFACE (IRIS Touch 600 and IRIS Touch 640)			
Quad band GSM 850/900/1800/1900 MHz			
SMA antenna connection			
IP (TCP) OUTBOUND ONLY			
Polling & Alarms TCP 53165			
Upload/download (Remote Service App) TCP 10001			
IRIS Touch 600 Series diagnostic & firmware upgrade TCP 51292			
4 PIN INPUTS			
Maximum input voltage range	0V to +24V		
Input 'low' threshold	< 1V		
Input 'high ' threshold	>2V		
Input pull-up impedance	Internal 10K to 5V supply		

2 RELAY OUTPUTS			
Maximum operating voltage	24V		
Maximum current rating	100mA		
POWER SUPPLY	**IRIS Touch 600**	**IRIS Touch 620**	**IRIS Touch 640**
Supply voltage 9-30V DC	✓	✓	✓
Typical current consumption	130mA	145mA	185mA
Note: These figures are based upon Ethernet being connected. With GSM/GPRS there will also be additional transient peak current of up to 250mA as GSM and GPRS transmissions (e.g. For network registration and calls) are made.			
WEIGHTS & DIMENSIONS			
IRIS TOUCH 600 Series PCB dimensions	120 x 90mm		
IRIS Touch 600 Series PCB weight	60 grams		
IRIS Touch 600 Series fully packaged weight	160 grams		

Conformance

The IRIS Touch range of alarm diallers comply with the following European Directives:

- 1999/5/EC (Radio & Telecoms Terminal Equipment Directive)
- 2006/95/EC (Low Voltage Directive)
- 2004/108/EC (Electromagnetic Compatibility Directive)

Conformance to EN50131 and EN50136

The IRIS Touch diallers are compatible with the requirements of European standards EN50131-1 (Alarm Systems – Intrusion and hold-up systems Part 1: System Requirements) (dated 2006) and EN50136-1-1 (Alarm Systems – Alarm transmission systems and equipment) (January 1998 with Amendment 1 August 2001) as follows:

- The IRIS Touch diallers conform to Environmental Class II
- The IRIS Touch diallers are compliant to ATS 6 compatible with Security Grade 4

Safety

Care should be taken when interconnecting telecommunications equipment that only like interfaces are interconnected to avoid safety hazards.

SELV: SELV (Safety Extra-Low Voltage) is defined as a secondary circuit which is so designed and protected that under normal and single fault conditions the voltage between any two accessible parts does not exceed a safe value (42.4V peak or 60V dc maximum).

The interfaces on the IRIS Touch dialler have the following safety classifications:

- Data Interface: SELV suitable for connection to the SELV interface on a data terminal such as a PC COM port
- Power Interface: SELV for connection to a DC supply
- Inputs and Outputs: SELV for connection to alarm output and input pins

For conformance to the requirements of EN60950, the dialler ***must*** be powered from a Limited Power Source as defined in EN60950. The output of the power supply should be fused at 3.0A (slow blow).

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